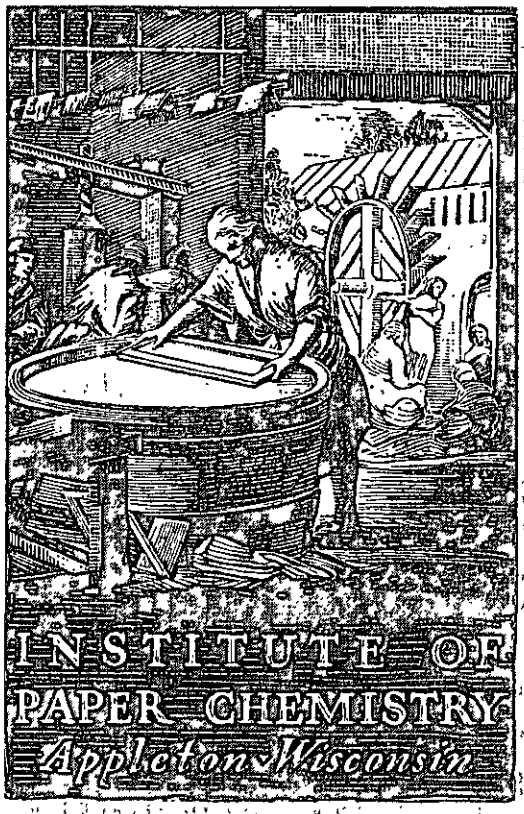

CONTINUOUS BASELINE STUDY

Project 1108-13

Progress Report 144

to

FOURDRINIER KRAFT BOARD INSTITUTE, INC.

May 1, 1959

THE INSTITUTE OF PAPER CHEMISTRY

Appleton, Wisconsin

CONTINUOUS BASELINE STUDY

Project 1108-13

Progress Report 144

to

FOURDRINIER KRAFT BOARD INSTITUTE, INC.

May 1, 1959

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THE INSTITUTE OF PAPER CHEMISTRY

Appleton, Wisconsin

PART I: PRESENTATION AND DISCUSSION OF RESULTS OBTAINED AT THE INSTITUTE OF PAPER CHEMISTRY

In conjunction with the F.K.I. Continuous Baseline Study, The Institute of Paper Chemistry has been directed to identify the participating mills by means of a scrambled system of code letters. Under this system, which was initiated in Progress Report 105, each mill is identified by a code letter different from that used for the previous month.

During the month of April, ninety-seven different sample lots of 42-lb. Fourdrinier kraft linerboard from seventeen different F.K.I. mills were processed at The Institute of Paper Chemistry. A tabulation of the number of samples classified according to mill may be seen in Table I.

These sample lots were tested for basis weight, caliper, bursting strength, and Elmendorf tear. The average strength results for each mill may be seen in Table II and are graphically presented in Figures 1 to 5. In addition to a comparison of the mill averages for the various tests, Table II also shows the current F.K.I. averages, the cumulative F.K.I. averages, and the F.K.I. indexes. The cumulative F.K.I. average is based on the results for the previous twelve months excluding the current period. Hence, in the case of the current report, it covers the period from April 1, 1958, to March 31, 1959. The F.K.I. indexes are obtained as follows:

$$\frac{\text{current F.K.I. average}}{\text{cumulative F.K.I. average}} \times 100 = \text{F.K.I. index (\%)}$$

TABLE I

NUMBER OF SAMPLE LOTS SUBMITTED BY EACH MILL

Mill Code	Number
A	0
B	2
C	8
D	4
E	7
F	4
G	8
H	5
I	0
J	8
K	13
L	4
M	5
N	4
O	2
P	9
Q	4
S	7
T	3
Total	97

TABLE II

SUMMARY OF COMPOSITE MILL AVERAGES--APRIL 1 THROUGH APRIL 30, 1959

Mill	Basis Weight, lb.	Caliper, points	Bursting Strength, p.s.i. gage	Elmendorf Tear, g./sheet	
				In Machine	Cross Machine
A	No samples submitted.				
B	43.4	12.7	110	364	390
C	43.5	13.1	116	279	346
D	44.3	12.3	116	331	369
E	43.2	12.5	109	309	382
F	45.0	12.8	112	305	373
G	43.9	12.4	108	358	394
H	43.4	13.8	112	320	354
I	No samples submitted.				
J	44.2	12.7	108	304	351
K	43.8	12.3	115	345	406
L	43.1	12.4	108	292	361
M	44.1	13.6	109	323	383
N	43.6	12.3	113	365	374
O	43.0	13.0	109	348	400
P	42.9	12.5	111	321	358
Q	44.0	12.1	112	337	369
S	43.5	12.0	113	321	374
T	42.9	13.1	113	320	366
Current FKI Average:	43.6	12.7	111	326	374
Cumulative FKI Average:	43.3	12.8	112	331	376
FKI Index, %	100.7	99.2	99.1	98.5	99.5

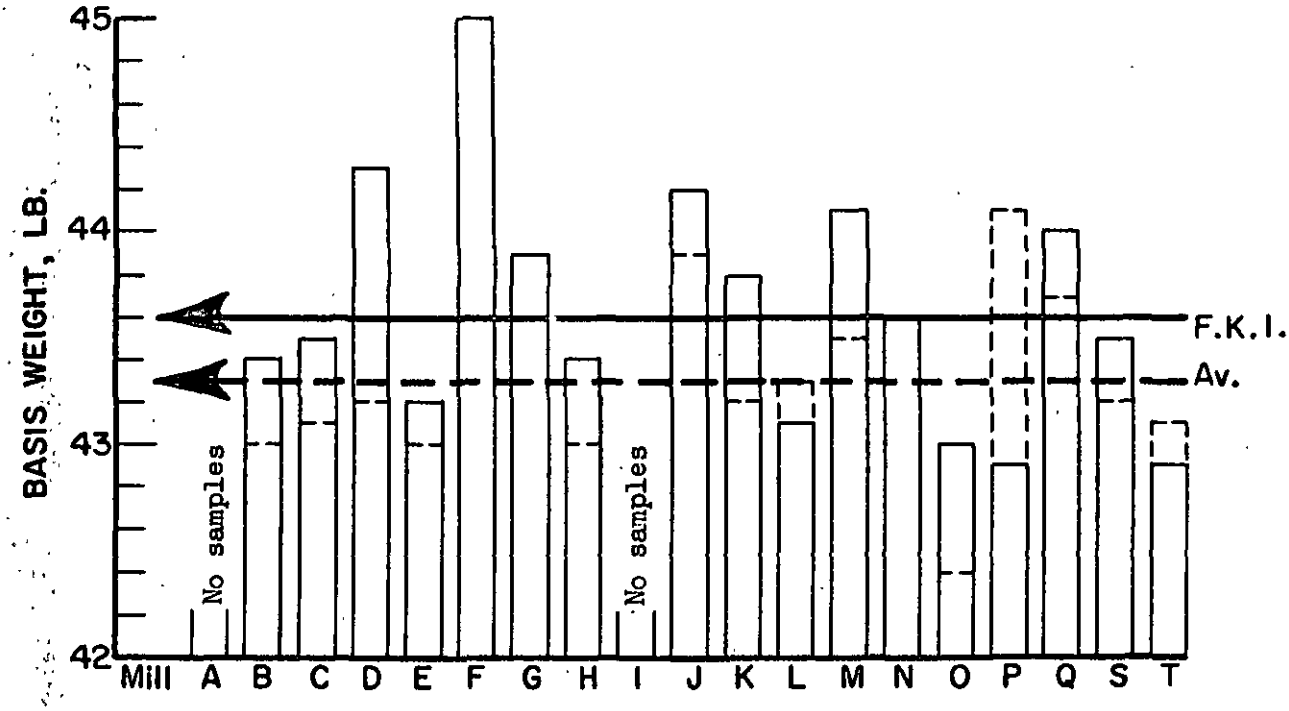

Figure 1

Comparison of Basis Weight Results for April, 1959

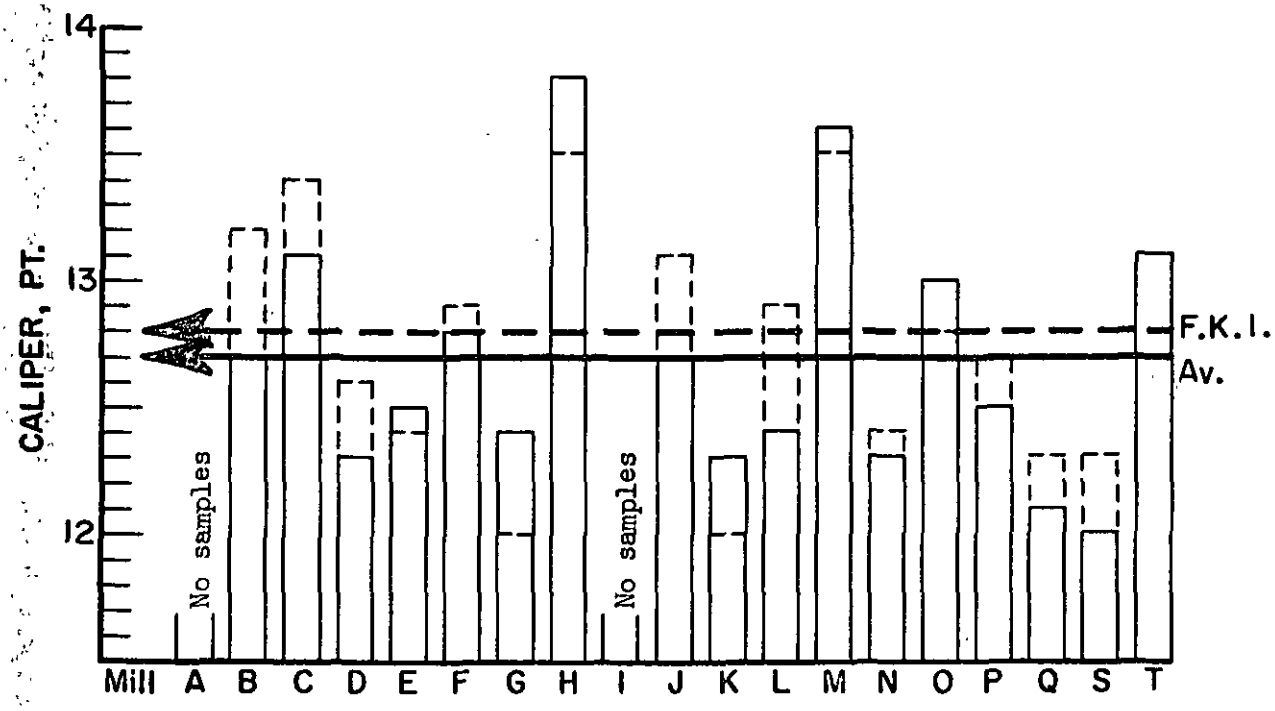

Figure 2

Comparison of Caliper Results for April, 1959

——— Current mill average

– – – – – Cumulative mill average

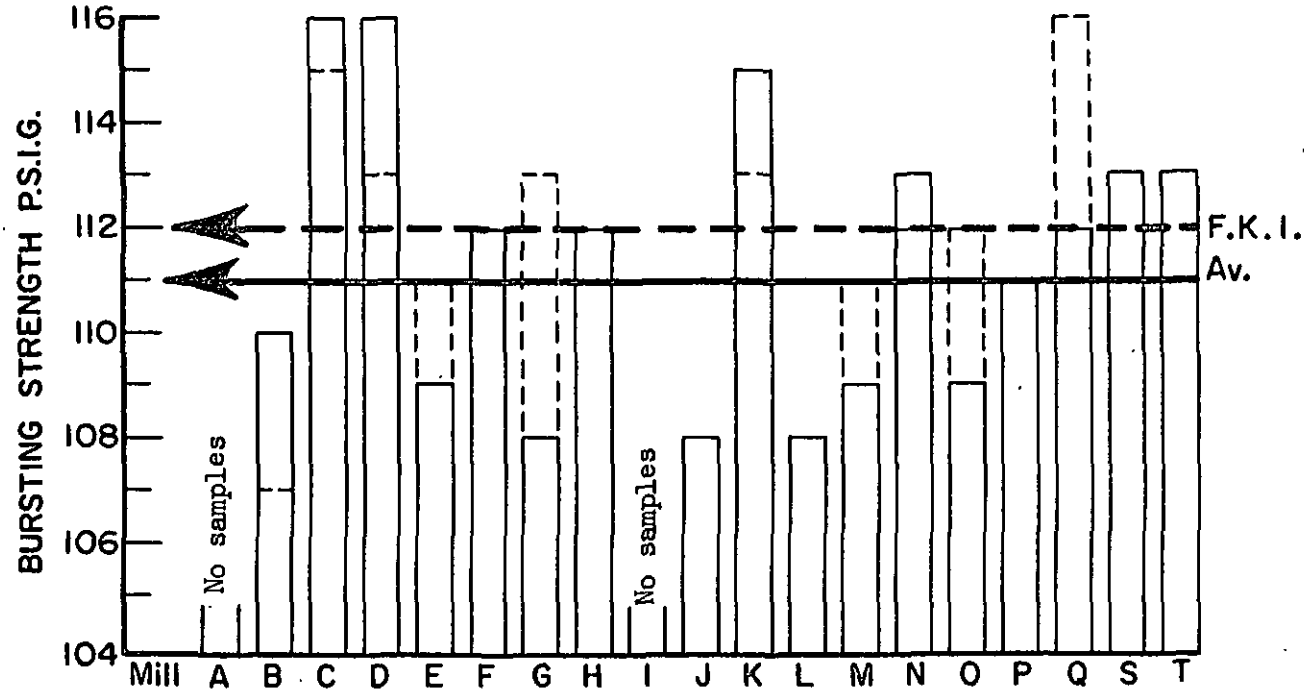

Figure 3

Comparison of Bursting Strength Results for April, 1959

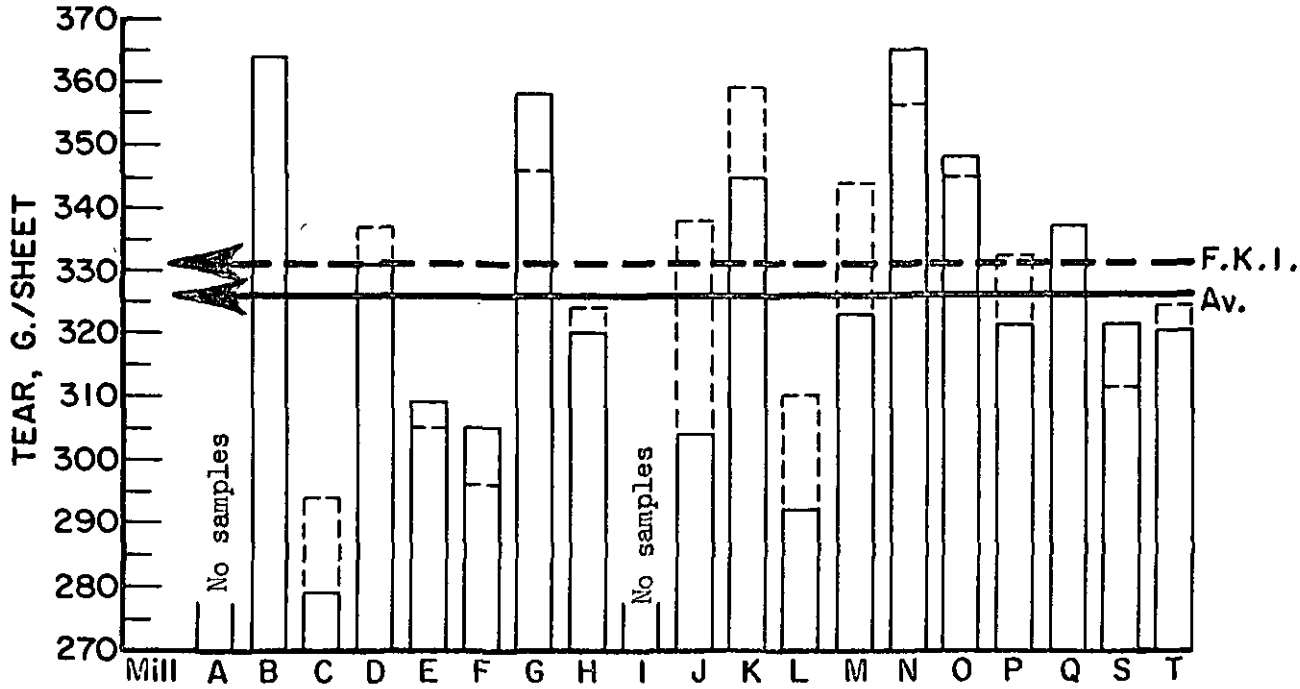

Figure 4

Comparison of Machine-Direction Tear Results for April, 1959

——— Current mill average
– – – – – Cumulative mill average

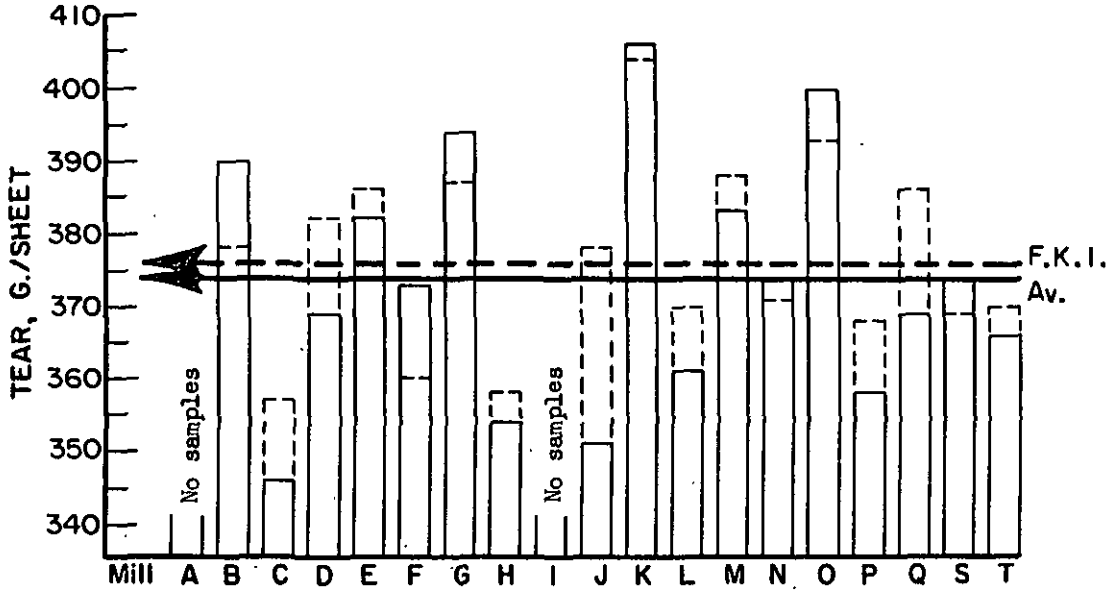

Figure 5

Comparison of Cross-Machine Direction Tear Results for April, 1959

——— Current mill average

- - - - - Cumulative mill average

The F.K.I. index provides a ready means of comparing the current quality with previous results. For example, the current F.K.I. average basis weight is 43.6 lb., and the cumulative F.K.I. average basis weight is 43.3 lb. Hence, the F.K.I. index for basis weight determined in per cent as indicated above is 100.7 and signifies that the current F.K.I. average basis weight is higher than the cumulative F.K.I. average.

A comparison of the results in Table II and Figure 1 shows that the average basis weight results for all mills conform to the 42-lb. specification set forth in Rule 41. Mill F had the highest average basis weight of 45.0 lb. which was approximately 7.1% higher than the 42-lb. specification. The lowest average basis weight of 42.9 lb., which was approximately 2.1% higher than the 42-lb. specification, was shared by Mills P and T.

The amount by which the mills vary from the 42-lb. specification is shown in Table II-A.

A comparison of the current F.K.I. basis weight average for this period with that for the previous period shows that basis weight has increased slightly.

A comparison of the average caliper values for the various mills (see Figure 2) shows that the current mill averages varied from a low of 12.0 points for Mill S to a high of 13.8 points for Mill H. The current F.K.I. caliper average is 12.7 points, which is slightly lower than the cumulative F.K.I. average of 12.8 points. The F.K.I. index for caliper is 99.2%.

TABLE II-A

PERCENTAGE DEVIATION FROM 42-LB. BASIS WEIGHT

SPECIFICATION

Mill Code	Per Cent
A	--
B	+3.3
C	+3.6
D	+5.5
E	+2.9
F	+7.1
G	+4.5
H	+3.3
I	--
J	+5.2
K	+4.3
L	+2.6
M	+5.0
N	+3.8
O	+2.4
P	+2.1
Q	+4.8
S	+3.6
T	+2.1

The average bursting strength values obtained for each mill are graphically presented in Figure 3. It may be observed in Table II and Figure 3 that the current mill averages for bursting strength ranged from a low of 108 for Mills G, J, and L to a high of 116 for Mills C and D. The current F.K.I. bursting strength average is 111 p.s.i. gage, which is slightly lower than the cumulative F.K.I. average of 112 p.s.i. gage.

The Elmendorf tear results shown in Table II for the various mills are presented graphically in Figures 4 and 5. These presentations show that Mill N had the highest machine direction tear average of 365 g./sheet, and Mill C had the lowest average of 279 g./sheet. It may be further noted in Table II that the highest cross-machine direction tear average of 406 g./sheet was obtained on the linerboard from Mill K and that the lowest average of 346 g./sheet was associated with Mill C. It may be observed also in Table II that the current F.K.I. averages for both machine direction and cross-machine direction Elmendorf tear are slightly lower than their respective F.K.I. averages.

A comparison of the F.K.I. indexes indicates that, for the current period, the current F.K.I. averages for caliper, bursting strength, machine direction and cross-machine direction Elmendorf tear are slightly lower than their respective cumulative F.K.I. averages, and the current F.K.I. average for basis weight is slightly higher than the cumulative F.K.I. average.

In order to compare the variation within a given mill, the test results for each particular mill have been tabulated in Tables III to XXI for Mills A through T, respectively.

In addition to the current and cumulative average, the mill factor and mill index are given for each mill. The cumulative mill average is the average test result obtained on the samples submitted by the particular mill for the previous twelve months excluding the current period. The mill factor and the mill index are obtained as follows:

$$\frac{\text{current mill average}}{\text{cumulative mill average}} \times 100 = \text{mill factor (\%)}$$

$$\frac{\text{current mill average}}{\text{cumulative F.K.I. average}} \times 100 = \text{mill index (\%)}$$

The mill factor and the mill index are a convenient means for comparing the current mill results either with the previous results for that particular mill or with the cumulative F.K.I. results. The reports also present a comparison of the test data obtained at the mills with test data obtained at The Institute of Paper Chemistry. These test data are presented and discussed on subsequent pages of this report.

It may be noted in Tables III through XXI that the test data include information about the sheet finish. The summarized results for the mills which submitted sample lots during the current period are shown in Table XXI-A.

SUMMARY OF INSTITUTE DATA--APRIL 1 THROUGH APRIL 30, 1959

TABLE III

MILL A -- 42-LB. LINERBOARD

File No.	Finish	Date Recd.	Date Made	Mch. No.	Basis Weight, lb. Max.	Basis Weight, lb. Min.	Basis Weight, lb. Av.	Caliper, points Max.	Caliper, points Min.	Caliper, points Av.	Bursting Strength, p.s.i. gage Max.	Bursting Strength, p.s.i. gage Min.	Bursting Strength, p.s.i. gage Av.	Elmendorf Tear, g./sheet In Max.	Elmendorf Tear, g./sheet In Min.	Elmendorf Tear, g./sheet In Av.	Elmendorf Tear, g./sheet Across Max.	Elmendorf Tear, g./sheet Across Min.	Elmendorf Tear, g./sheet Across Av.
No samples submitted.																			

TABLE IV

MILL B -- 42-LB. LINERBOARD

181706	W.	4/ 1/59	3/15/59	2	44.4	42.8	43.7	13.7	13.0	13.3	125	91	108	400	320	355	416	344	385[a]
181808	W.	4/14/59	4/ 6/59	4	44.0	42.0	43.2	12.8	11.3	12.0	139	97	111	400	336	374[a]	432	368	395[a]
Current Mill Average:							43.4			12.7			110			364			390
Cumulative Mill Average:							43.0			13.2			107			364			378
Mill Factor, %							100.9			96.2			102.8			100.0			103.2
Mill Index, %							100.2			99.2			98.2			110.0			103.7

[a]This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

SUMMARY OF INSTITUTE DATA--APRIL 1 THROUGH APRIL 30, 1959 (continued)

TABLE V

MILL C --42-LB. LINERBOARD

File No.	Finish	Date Recd.	Date Made	Mch. No.	Basis Weight, lb.			Caliper, points			Bursting Strength, p.s.i. gage			Elmendorf Tear, g./sheet					
														In			Across		
					Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.
181736	W.F.	4/ 3/59	3/10/59	1	44.0	42.0	42.5	13.2	12.9	13.0	138	101	125	320	232	282[a]	368	320	347[a]
181737	W.F.	4/ 3/59	3/14/59	1	44.0	42.0	43.1	14.1	13.0	13.4	133	75	112	296	240	273	384	336	349[a]
181773	W.F.	4/ 6/59	3/16/59	1	43.4	42.0	42.7	13.9	12.0	12.6	156	84	120	280	240	265	352	320	335[a]
181774	W.F.	4/ 6/59	3/19/59	1	45.4	42.4	43.9	14.0	13.0	13.2	138	111	127	336	264	303[a]	400	360	376[a]
181856	W.F.	4/17/59	3/25/59	1	44.4	43.4	44.0	13.9	12.9	13.2	125	84	108	336	240	293[a]	384	328	351[a]
181857	W.F.	4/17/59	3/29/59	1	44.4	43.8	44.2	13.3	12.7	13.0	143	102	120	328	264	299[a]	384	328	352[a]
181858	W.F.	4/17/59	4/ 1/59	1	44.2	43.6	43.9	13.6	12.8	13.2	123	75	106	296	224	263[a]	368	296	327[a]
181859	W.F.	4/17/59	4/ 8/59	1	44.2	43.2	43.8	13.3	12.2	12.7	124	88	108	280	224	254[a]	352	272	327[a]
Current Mill Average:							43.5			13.1			116			279			346
Cumulative Mill Average:							43.1			13.4			115			294			357
Mill Factor, %							100.9			97.8			100.9			94.9			96.9
Mill Index, %							100.5			102.3			103.6			84.3			92.0

[a]This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

SUMMARY OF INSTITUTE DATA--APRIL 1 THROUGH APRIL 30, 1959 (continued)

TABLE VI

MILL D -- 42-LB. LINERBOARD

File No.	Finish	Date Recd.	Date Made	Mch. No.	Basis Weight, lb.			Caliper, points			Bursting Strength, p.s.i. gage			Elmendorf Tear, g./sheet					
														In			Across		
					Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.
181707	W.F.	4/ 1/59	3/10/59	2	45.6	44.0	44.5	13.1	12.2	12.7	135	88	116	384	304	338[a]	424	320	377[a]
181782	W.F.	4/ 9/59	3/17/59	2	44.2	42.8	43.6	12.8	12.2	12.5	128	67	108	408	280	347[a]	376	312	348[a]
181882	W.F.	4/21/59	3/19/59	2	45.6	44.0	44.4	12.2	11.6	11.9	139	103	121	368	288	326[a]	400	352	381[a]
181883	W.F.	4/21/59	3/20/59	2	45.6	44.0	44.5	12.3	11.7	12.0	135	98	118	336	272	314[a]	432	344	371[a]
Current Mill Average:							44.3			12.3			116			331			369
Cumulative Mill Average:							43.2			12.6			113			337			382
Mill Factor, %							102.5			97.6			102.7			98.2			96.6
Mill Index, %							102.3			96.1			103.6			100.0			98.1

[a]This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

SUMMARY OF INSTITUTE DATA--APRIL 1 THROUGH APRIL 30, 1959 (continued)

TABLE VII

MILL E -- 42-LB. LINERBOARD

File No.	Finish	Date Recd.	Date Made	Mch. No.	Basis Weight, lb.			Caliper, points			Bursting Strength, p.s.i. gage			Elmendorf Tear, g./sheet					
														In			Across		
					Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.
181716	WF1S	4/ 1/59	3/23/59	1	44.0	42.0	43.0	13.4	12.4	12.8	131	85	111	400	272	315	432	336	381[a]
181717	WF1S	4/ 1/59	3/25/59	1	44.0	42.0	43.2	13.7	12.5	12.9	126	95	114	368	272	319	440	336	395[a]
181718	WF1S	4/ 1/59	3/26/59	1	43.2	42.4	42.9	13.2	12.5	12.8	130	98	112	360	272	317[a]	416	336	373[a]
181809	WF1S	4/14/59	4/ 3/59	1	44.0	42.4	43.5	13.1	12.0	12.6	133	90	109	400	208	313	456	352	401[a]
181810	WF1S	4/14/59	4/ 8/59	1	44.0	42.6	43.6	12.9	12.0	12.2	123	85	106	336	264	297[a]	392	328	359[a]
181811	WF1S	4/14/59	4/ 9/59	1	44.0	42.4	43.4	12.4	12.0	12.2	120	90	107	352	272	299	408	344	371[a]
181957	WF1S	4/27/59	4/23/59	1	44.0	42.2	43.1	13.2	11.8	12.3	130	85	106	352	256	305[a]	448	328	393[a]
Current Mill Average:							43.2			12.5			109			309			382
Cumulative Mill Average:							43.0			12.4			111			305			386
Mill Factor, %							100.5			100.8			98.2			101.3			99.0
Mill Index, %							99.8			97.7			97.3			93.4			101.6

[a]This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

SUMMARY OF INSTITUTE DATA--APRIL 1 THROUGH APRIL 30, 1959 (continued)

TABLE VIII

MILL F -- 42-LB. LINERBOARD

File No.	Finish	Date Recd.	Date Made	Mch. No.	Basis Weight, lb.			Caliper, points			Bursting Strength, p.s.i. gage			Elmendorf Tear, g./sheet					
														In			Across		
					Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.
181708	W.F.	4/ 1/59	2/11/59	1	45.8	43.8	44.6	13.7	12.3	12.9	136	88	116	376	240	301	480	320	397[a]
181723	W.F.	4/ 2/59	2/26/59	1	46.2	44.0	45.0	14.0	12.9	13.2	130	90	113	384	280	321	416	328	365[a]
181855	W.F.	4/17/59	3/10/59	1	47.6	44.4	46.2	13.2	12.2	12.8	133	100	117	352	264	305[a]	408	344	382[a]
181958	W.F.	4/27/59	3/19/59	1	45.0	43.0	44.1	13.0	11.8	12.3	122	88	103	320	264	294[a]	392	312	347[a]
Current Mill Average:							45.0			12.8			112			305			373
Cumulative Mill Average:							43.6			12.9			112			296			360
Mill Factor, %							103.2			99.2			100.0			103.0			103.6
Mill Index, %							103.9			100.0			100.0			92.1			99.2

[a]This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

SUMMARY OF INSTITUTE DATA--APRIL 1 THROUGH APRIL 30, 1959 (continued)

TABLE IX

MILL G -- 42-LB. LINERBOARD

File No.	Finish	Date Recd.	Date Made	Mch. No.	Basis Weight, lb.			Caliper, points			Bursting Strength, p.s.i. gage			Elmendorf Tear, g./sheet					
														In			Across		
					Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.
181850	W.F.	4/16/59	3/24/59	-	44.0	42.2	43.1	12.3	11.9	12.1	123	83	103	416	304	350[a]	408	344	377[a]
181851	W.F.	4/16/59	3/25/59	-	44.0	42.2	43.0	12.4	11.9	12.1	130	87	111	416	304	346[a]	424	360	387[a]
181852	W.F.	4/16/59	3/25/59	-	45.4	42.2	43.7	12.8	11.9	12.1	127	91	111	400	272	349[a]	448	352	398[a]
181853	W.F.	4/16/59	3/27/59	-	45.2	43.6	44.2	13.1	12.5	13.0	133	76	107	464	288	352	424	368	401[a]
181867	W.F.	4/20/59	3/30/59	-	43.2	41.6	42.2	12.7	11.9	12.2	125	80	110	384	296	338[a]	416	344	380[a]
181868	W.F.	4/20/59	4/ 3/59	-	46.0	44.0	44.8	12.9	12.0	12.5	126	89	107	456	360	399[a]	440	384	407[a]
181869	W.F.	4/20/59	4/ 3/59	-	45.6	44.0	44.6	13.1	12.2	12.7	140	94	110	392	336	367[a]	464	368	404[a]
181870	W.F.	4/20/59	4/11/59	-	46.2	44.6	45.5	13.5	12.3	12.9	135	88	108	416	312	367	472	352	401[a]
Current Mill Average:							43.9			12.4			108			358			394
Cumulative Mill Average:							43.6			12.0			113			346			387
Mill Factor, %							100.7			103.3			95.6			103.5			101.8
Mill Index, %							101.4			96.9			96.4			108.2			104.8

[a]This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

SUMMARY OF INSTITUTE DATA--APRIL 1 THROUGH APRIL 30, 1959 (continued)

TABLE X

MILL H -- 42-LB. LINERBOARD

File No.	Finish	Date Recd.	Date Made	Mch. No.	Basis Weight, lb.			Caliper, points			Bursting Strength, p.s.i. gage			Elmendorf Tear, g./sheet					
														In			Across		
					Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.
181801	WFLS	4/13/59	3/ 7/59	2	44.2	42.4	43.6	14.3	13.8	14.0	138	94	113	352	272	315	432	320	366[a]
181802	WFLS	4/13/59	3/12/59	2	44.2	42.0	43.1	14.0	13.0	13.6	131	88	113	336	296	317	376	320	354[a]
181803	WFLS	4/13/59	3/13/59	2	44.0	42.4	43.5	14.3	13.6	14.0	128	79	110	360	272	313[a]	400	336	359[a]
181804	WFLS	4/13/59	3/16/59	2	44.2	42.0	43.4	14.1	13.0	13.6	130	84	107	368	288	333[a]	360	288	335[a]
181805	WFLS	4/13/59	3/17/59	2	44.2	42.2	43.2	14.2	13.2	13.9	141	95	115	392	240	319	376	320	356[a]
Current Mill Average:							43.4			13.8			112			320			354
Cumulative Mill Average:							43.0			13.5			111			324			358
Mill Factor, %							100.9			102.2			100.9			98.8			98.9
Mill Index, %							100.2			107.8			100.0			96.7			94.1

TABLE XI

MILL I -- 42-LB. LINERBOARD

No samples submitted.

[a]This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

SUMMARY OF INSTITUTE DATA--APRIL 1 THROUGH APRIL 30, 1959 (continued)

TABLE XII

MILL J -- 42-LB. LINERBOARD

File No.	Finish	Date Recd.	Date Made	Mch. No.	Basis Weight, lb.			Caliper, points			Bursting Strength, p.s.i. gage			Elmendorf Tear, g./sheet					
														In			Across		
					Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.
181792	W.F.	4/10/59	3/ 5/59	1	44.2	43.2	43.8	13.0	12.2	12.7	130	86	105	328	240	279	336	288	317[a]
181793	W.F.	4/10/59	3/ 6/59	1	46.0	44.2	45.4	13.3	12.5	13.0	125	93	110	368	240	300	400	320	355[a]
181794	W.F.	4/10/59	3/ 9/59	1	44.2	43.0	43.9	13.2	12.2	12.8	127	90	108	320	240	287	352	304	328[a]
181795	W.F.	4/10/59	3/11/59	1	44.2	42.4	43.6	13.0	12.0	12.4	128	84	111	352	272	319	408	320	357[a]
181796	W.F.	4/10/59	3/26/59	1	44.2	42.8	43.8	13.1	12.0	12.6	131	95	113	344	256	296	392	320	355[a]
181797	W.F.	4/10/59	3/26/59	1	46.2	44.0	45.0	13.6	12.5	12.9	132	88	110	352	272	315	400	336	371[a]
181798	W.F.	4/10/59	3/27/59	1	44.0	41.8	43.1	13.0	12.0	12.4	127	88	107	384	272	319	376	328	348[a]
181799	W.F.	4/10/59	3/27/59	1	47.0	42.0	45.2	13.4	12.5	13.0	122	85	103	352	272	317	416	352	378[a]
Current Mill Average:							44.2			12.7			108			304			351
Cumulative Mill Average:							43.9			13.1			108			338			378
Mill Factor, %							100.7			96.9			100.0			89.9			92.9
Mill Index, %							102.1			99.2			96.4			91.8			93.4

[a]This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

SUMMARY OF INSTITUTE DATA--APRIL 1 THROUGH APRIL 30, 1959 (continued)

TABLE XIII

MILL K -- 42-LB. LINERBOARD

File No.	Finish	Date Recd.	Date Made	Mch. No.	Basis Weight, lb.			Caliper, points			Bursting Strength, p.s.i. gage			Elmendorf Tear, g./sheet					
														In			Across		
					Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.
181713	W.B.	4/ 1/59	3/16/59	-	44.0	43.0	43.6	13.0	12.2	12.7	125	85	108	448	320	361	448	352	399[a]
181714	W.B.	4/ 1/59	3/17/59	-	46.0	43.0	44.6	13.0	11.1	12.4	130	96	114	400	304	346	448	368	408[a]
181715	W.B.	4/ 1/59	3/18/59	-	45.0	43.4	44.2	12.9	12.0	12.5	136	91	112	384	312	353[a]	480	376	419[a]
181766	W.B.	4/ 6/59	3/19/59	-	44.0	42.0	43.4	12.9	12.0	12.4	131	104	118	352	320	335[a]	440	360	399[a]
181767	W.B.	4/ 6/59	3/20/59	-	44.0	42.4	43.1	13.0	12.0	12.5	131	92	114	368	288	327[a]	416	336	375[a]
181768	W.B.	4/ 6/59	3/20/59	-	44.6	43.0	43.8	13.0	11.5	12.2	134	86	114	400	296	351	456	352	426[a]
181769	W.B.	4/ 6/59	3/21/59	-	44.6	43.0	43.9	13.1	12.0	12.4	134	93	111	376	320	354[a]	464	368	412[a]
181770	W.B.	4/ 6/59	3/22/59	-	44.2	43.6	43.9	12.9	11.1	12.2	138	105	121	392	304	351	448	384	413[a]
181845	W.B.	4/15/59	3/23/59	-	44.0	42.2	43.2	12.5	11.9	12.1	138	79	115	376	312	348[a]	448	376	403[a]
181846	W.B.	4/15/59	3/29/59	-	45.0	42.6	43.9	12.2	11.3	11.8	138	90	116	384	304	343[a]	424	368	396[a]
181847	W.B.	4/15/59	3/30/59	-	44.8	43.2	44.1	12.3	11.4	12.0	133	106	119	360	304	334[a]	448	376	409[a]
181848	W.B.	4/15/59	3/30/59	-	44.4	42.6	43.7	12.7	11.9	12.2	128	102	114	368	288	330[a]	440	384	409[a]
181849	W.B.	4/15/59	3/31/59	-	45.2	42.4	43.9	12.5	11.7	12.0	140	89	114	384	320	353[a]	440	368	409[a]
Current Mill Average:							43.8			12.3			115			345			406
Cumulative Mill Average:							43.2			12.0			113			359			404
Mill Factor, %							101.4			102.5			101.8			96.1			100.5
Mill Index, %							101.2			96.1			102.7			104.2			108.0

[a]This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

SUMMARY OF INSTITUTE DATA--APRIL 1 THROUGH APRIL 30, 1959 (continued)

TABLE XIV

MILL L -- 42-LB. LINERBOARD

File No.	Finish	Date Recd.	Date Made	Mch. No.	Basis Weight, lb.			Caliper, points			Bursting Strength, p.s.i. gage			Elmendorf Tear, g./sheet					
														In			Across		
					Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.
181763	WF1S	4/ 6/59	3/23/59	1	44.2	41.8	42.7	13.3	12.0	12.5	142	79	105	352	224	291[a]	384	328	360[a]
181764	WF1S	4/ 6/59	3/25/59	1	44.2	42.2	43.3	13.0	12.0	12.5	130	84	106	328	248	283[a]	392	328	359[a]
181800	WF1S	4/13/59	4/ 1/59	1	43.6	41.2	42.2	12.4	12.0	12.1	125	80	107	320	192	287	400	304	352[a]
181873	WF1S	4/20/59	4/ 6/59	1	45.8	43.0	44.1	13.1	12.0	12.5	141	84	114	368	256	305	400	344	373[a]
Current Mill Average:							43.1			12.4			108			292			361
Cumulative Mill Average:							43.3			12.9			108			310			370
Mill Factor, %							99.5			96.1			100.0			94.2			97.6
Mill Index, %							99.5			96.9			96.4			88.2			96.0

[a]This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

SUMMARY OF INSTITUTE DATA--APRIL 1 THROUGH APRIL 30, 1959 (continued)

TABLE XV

MILL M -- 42-LB. LINERBOARD

File No.	Finish	Date Recd.	Date Made	Mch. No.	Basis Weight, lb.			Caliper, points			Bursting Strength, p.s.i. gage			Elmendorf Tear, g./sheet					
														In			Across		
					Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.
181738	----	4/ 3/59	3/20/59	2	44.2	43.0	43.8	14.5	13.4	14.0	125	85	108	384	312	350[a]	432	352	387[a]
181777	WF1S	4/ 7/59	3/23/59	2	44.2	43.8	44.0	14.3	13.0	13.6	144	100	121	360	280	325[a]	440	376	407[a]
181874	WF1S	4/20/59	4/ 7/59	2	45.0	44.0	44.3	14.1	13.0	13.6	129	70	104	360	264	320[a]	408	352	387[a]
181884	WF1S	4/23/59	4/14/59	2	45.8	44.2	44.8	14.6	12.2	13.6	130	88	104	392	272	323	448	328	376[a]
181921	WF1S	4/24/59	4/15/59	2	43.8	42.6	43.4	14.0	12.6	13.1	128	87	107	336	264	298	384	328	356[a]
Current Mill Average:							44.1			13.6			109			323			383
Cumulative Mill Average:							43.5			13.5			111			344			388
Mill Factor, %							101.4			100.7			98.2			93.9			98.7
Mill Index, %							101.8			106.2			97.3			97.6			101.9

[a]This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

SUMMARY OF INSTITUTE DATA--APRIL 1 THROUGH APRIL 30, 1959 (continued)

TABLE XVI

MILL N -- 42-LB. LINERBOARD

File No.	Finish	Date Recd.	Date Made	Mch. No.	Basis Weight, lb.			Caliper, points			Bursting Strength, p.s.i. gage			Elmendorf Tear, g./sheet					
														In			Across		
					Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.
181771	W.F.	4/ 6/59	3/23/59	-	44.2	42.4	43.6	13.0	12.0	12.5	134	98	115	416	352	387[a]	432	352	383[a]
181772	W.F.	4/ 6/59	3/23/59	-	44.6	43.0	43.9	13.0	12.1	12.6	134	90	113	448	336	386[a]	416	352	383[a]
181875	W.F.	4/20/59	4/ 2/59	-	44.0	42.6	43.4	12.5	11.8	12.1	129	95	113	376	312	343[a]	408	328	365[a]
181876	W.F.	4/20/59	4/ 2/59	-	44.2	42.2	43.6	12.8	11.8	12.2	127	93	109	392	296	343[a]	408	320	366[a]
Current Mill Average:							43.6			12.3			113			365			374
Cumulative Mill Average:							43.6			12.4			112			356			371
Mill Factor, %							100.0			99.2			100.9			102.5			100.8
Mill Index, %							100.7			96.1			100.9			110.3			99.5

[a]This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

SUMMARY OF INSTITUTE DATA--APRIL 1 THROUGH APRIL 30, 1959 (continued)

TABLE XVII

MILL O -- 42-LB. LINERBOARD

File No.	Finish	Date Recd.	Date Made	Mch. No.	Basis Weight, lb.			Caliper, points			Bursting Strength, p.s.i. gage			Elmendorf Tear, g./sheet In			Elmendorf Tear, g./sheet Across		
					Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.
181709	----	4/ 1/59	3/20/59	2	43.8	42.0	42.5	13.5	12.5	13.0	121	71	105	400	304	355[a]	448	368	399[a]
181710	----	4/ 1/59	3/23/59	1	44.0	42.0	43.5	13.1	12.5	12.9	129	90	113	392	288	341[a]	448	352	401[a]
Current Mill Average:							43.0			13.0			109			348			400
Cumulative Mill Average:							42.4			12.8			112			345			393
Mill Factor, %							101.4			101.6			97.3			100.9			101.8
Mill Index, %							99.3			101.6			97.3			105.1			106.4

[a]This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

SUMMARY OF INSTITUTE DATA--APRIL 1 THROUGH APRIL 30, 1959 (continued)

TABLE XVIII

MILL P -- 42-LB. LINERBOARD

File No.	Finish	Date Recd.	Date Made	Mch. No.	Basis Weight, lb.			Caliper, points			Bursting Strength, p.s.i. gage			Elmendorf Tear, g./sheet In			Elmendorf Tear, g./sheet Across		
					Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.
181703	W.F.	4/ 1/59	3/25/59	-	43.2	42.2	42.7	12.6	12.0	12.2	133	90	112	336	264	307	384	320	359[a]
181704	W.F.	4/ 1/59	3/26/59	-	44.0	44.0	44.0	13.0	12.0	12.7	135	85	112	376	248	329	416	320	357[a]
181705	W.F.	4/ 1/59	3/27/59	-	44.0	42.4	43.0	13.2	12.5	12.8	129	80	109	416	304	345[a]	408	320	371[a]
181760	W.F.	4/ 6/59	4/ 1/59	-	43.8	42.8	43.5	12.8	12.0	12.4	132	99	114	376	280	320[a]	392	320	353[a]
181761	W.F.	4/ 6/59	4/ 2/59	-	43.4	42.2	42.9	13.1	12.1	12.8	118	91	106	352	272	319[a]	432	328	361[a]
181762	W.F.	4/ 6/59	4/ 3/59	-	43.8	42.2	43.1	13.0	12.2	12.6	125	93	113	368	256	321[a]	392	304	349[a]
181842	W.F.	4/15/59	4/ 8/59	-	43.0	42.0	42.4	12.3	11.9	12.1	134	88	116	384	280	316[a]	424	336	368[a]
181843	W.F.	4/15/59	4/ 9/59	-	42.4	41.8	42.0	12.7	12.0	12.3	123	88	108	344	256	308[a]	384	328	353[a]
181844	W.F.	4/15/59	4/10/59	-	43.0	42.0	42.4	12.8	12.1	12.4	125	92	110	368	296	325[a]	384	328	355[a]
Current Mill Average:							42.9			12.5			111			321			358
Cumulative Mill Average:							44.1			12.7			111			332			368
Mill Factor, %							97.3			98.4			100.0			96.7			97.3
Mill Index, %							99.1			97.7			99.1			97.0			95.2

[a]This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

SUMMARY OF INSTITUTE DATA--APRIL 1 THROUGH APRIL 30, 1959 (continued)

TABLE XIX

MILL Q -- 42-LB. LINERBOARD

File No.	Finish	Date Recd.	Date Made	Mch. No.	Basis Weight, lb.			Caliper, points			Bursting Strength, p.s.i. gage			Elmendorf Tear, g./sheet					
														In			Across		
					Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.
181775	W.F.	4/ 7/59	4/ 1/59	2	43.8	43.0	43.4	12.8	12.0	12.3	133	86	110	400	272	335[a]	392	344	363[a]
181776	W.F.	4/ 7/59	4/ 1/59	2	43.8	43.0	43.6	12.7	11.5	12.2	126	83	110	416	288	341[a]	416	344	369[a]
181871	W.F.	4/20/59	4/10/59	2	44.8	43.6	44.2	12.2	11.5	11.9	131	77	108	384	280	331[a]	392	336	370[a]
181872	W.F.	4/20/59	4/13/59	1	45.2	44.2	44.8	13.0	11.5	12.0	138	94	119	384	296	340[a]	408	344	374[a]
Current Mill Average:							44.0			12.1			112			337			369
Cumulative Mill Average:							43.7			12.3			116			337			386
Mill Factor, %							100.7			98.4			96.6			100.0			95.6
Mill Index, %							101.6			94.5			100.0			101.8			98.1

[a]This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

SUMMARY OF INSTITUTE DATA--APRIL 1 THROUGH APRIL 30, 1959 (continued)

TABLE XX

MILL S -- 42-LB. LINERBOARD

File No.	Finish	Date Recd.	Date Made	Mch. No.	Basis Weight, lb.			Caliper, points			Bursting Strength, p.s.i. gage			Elmendorf Tear, g./sheet					
														In			Across		
					Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.
181783	W.F.	4/ 9/59	3/18/59	2	43.6	41.8	42.7	11.8	10.8	11.4	132	82	112	368	272	318[a]	384	336	351[a]
181784	W.F.	4/ 9/59	3/18/59	2	44.0	42.0	43.0	12.6	11.3	11.8	129	90	113	368	272	315[a]	464	320	361[a]
181785	W.F.	4/ 9/59	3/21/59	2	44.8	43.0	43.8	13.1	12.1	12.6	126	95	112	384	272	331[a]	448	360	386[a]
181786	W.F.	4/ 9/59	3/21/59	2	44.8	43.6	44.0	12.9	12.1	12.5	128	94	111	360	304	331	432	360	389[a]
181787	W.F.	4/ 9/59	3/25/59	2	44.4	43.2	44.0	13.0	12.0	12.4	141	90	114	384	296	341	400	320	371[a]
181806	W.F.	4/13/59	4/ 1/59	2	44.0	42.2	43.3	12.1	11.4	11.9	131	104	117	352	248	299[a]	400	336	362[a]
181807	W.F.	4/13/59	4/ 1/59	2	44.0	42.2	43.4	12.2	11.2	11.7	134	85	115	336	288	311	528	352	396[a]
Current Mill Average:							43.5			12.0			113			321			374
Cumulative Mill Average:							43.2			12.3			113			311			369
Mill Factor, %							100.7			97.6			100.0			103.2			101.4
Mill Index, %							100.5			93.8			100.9			97.0			99.5

[a]This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

SUMMARY OF INSTITUTE DATA--APRIL 1 THROUGH APRIL 30, 1959 (continued)

TABLE XXI

MILL T -- 42-LB. LINERBOARD

File No.	Finish	Date Recd.	Date Made	Mch. No.	Basis Weight, lb.			Caliper, points			Bursting Strength, p.s.i. gage			Elmendorf Tear, g./sheet In			Elmendorf Tear, g./sheet Across		
					Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.
181711	WF1S	4/ 1/59	3/20/59	1	44.0	42.8	43.3	13.9	12.8	13.3	133	67	111	432	256	345[a]	424	344	378[a]
181712	WF1S	4/ 1/59	3/21/59	1	44.0	42.0	43.0	13.7	12.5	13.1	131	93	115	336	288	319[a]	448	320	369[a]
181765	WF1S	4/ 6/59	3/26/59	1	43.2	41.6	42.6	13.5	12.7	13.0	127	91	112	336	256	295[a]	376	312	350[a]
Current Mill Average:							42.9			13.1			113			320			366
Cumulative Mill Average:							43.1			13.1			111			324			370
Mill Factor, %							99.5			100.0			101.8			98.8			98.9
Mill Index, %							99.1			102.3			100.9			96.7			97.3

[a]This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

TABLE XXI-A

SUMMARY OF SHEET FINISH DATA

Mill Code	Number of Sample Lots		
	Water Finish	Water Finish One Side	Other
A	No samples submitted.		
B	2		
C	8		
D	4		
E		7	
F	4		
G	8		
H		5	
I	No samples submitted.		
J	8		
K	13		
L		4	
M		4	1[a]
N	4		
O			2[a]
P	9		
Q	4		
S	7		
T		3	
Totals	71	23	3

[a] Unidentified.

PART II. COMPARISON OF RESULTS OBTAINED AT THE INSTITUTE OF PAPER CHEMISTRY WITH THOSE OBTAINED AT THE MILLS

As a supplementary part of the Continuous Baseline Study, comparisons of the mill test results with those obtained at The Institute of Paper Chemistry on corresponding samples have been included in this report. Mill test conditions are shown in Table XXII, where it may be noted that the atmospheric conditions used prior to and during the testing period were relatively uniform for the mills which reported this information. However, the preconditioning and conditioning time periods varied considerably.

A summary of the Institute and mill test results for the current period is shown in Table XXIII, and a comparison of differences between Institute and mill test results is given in Table XXIV for the current period and the two previous periods.

A comparison of the test data in Tables XXIII and XXIV reveals the level of agreement between mill and Institute data for basis weight, caliper, bursting strength, and Elmendorf tear. Table XXIII shows the over-all average difference between Institute and mill results for each of these tests based on the data for all sample lots submitted by each mill for the current period. In addition, the maximum difference encountered in comparing the Institute and mill test results for a given sample lot is shown. In Table XXIV, the over-all average differences shown for each test in Table XXIII have been calculated on a percentage basis for each mill. In addition, for purposes of comparison, the average percentage differences for the preceding two periods are shown.

TABLE XXII

PRECONDITIONING AND CONDITIONING DATA FOR MILL TESTS

Mill Code	Preconditioning R.H., %	Preconditioning Temperature, °F.	Preconditioning Time, hr.	Conditioning R.H., %	Conditioning Temperature, °F.	Conditioning Time, hr.
A		No samples submitted.				
B		None		53	73	--
C		None		40-82	82-86	--
D		None		50	73-75	24
E	53	72	--	45-50	65-71	--
F	43-75	68-74	0.5	50	70-73	24-48
G	49-50	73-74	48	50	73	--
H	50	72	24		None	
I		No samples submitted.				
J	50	73	24	50	73	24
K		None		52-55	70-72	48
L	50	73	48-120	50	73	2
M	50	70-71	120	50	70-73	120
N		None		50	73	0.5
O		None		50	73	24-48
P	33--35	77-78	8	48-52	71-73	16
Q		None		50	73	24
S	50	73	24	50	73	24
T		None		38-66	75-94	--

TABLE XXIII

SUMMARY OF TEST RESULT COMPARISONS (AVERAGE MILL AND INSTITUTE RESULTS)

Mills*	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	S	T
No. Samples Compared	0	2	8	4	7	4	8	5	0	8	13	4	5	4	2	9	4	7	3
Basis Weight																			
Institute		43.4	43.5	44.3	43.2	45.0	43.9	43.4		44.2	43.8	43.1	44.1	43.6	43.0	42.9	44.0	43.5	42.9
Mill		43.4	42.4	43.8	42.4	43.7	43.1	44.0		43.2	43.8	42.8	43.3	43.0	42.3	42.9	43.7	43.6	42.6
Av. Diff.**		0.0	-1.1	-0.5	-0.8	-1.3	-0.8	+0.6		-1.0	0.0	-0.3	-0.8	-0.6	-0.7	0.0	-0.3	+0.1	-0.3
Max. Diff.***		±0.4	-2.1	-1.0	-1.0	-2.2	-1.2	+1.0		-1.4	±0.2	-0.9	-1.3	-0.9	-1.1	+1.0	-0.8	+1.4	-0.6
Caliper																			
Institute		12.7	13.1	12.3	12.5	12.8	12.4	13.8		12.7	12.3	12.4	13.6	12.3	13.0	12.5	12.1	12.0	13.1
Mill		12.3	12.8	12.1	12.4	12.7	12.4	13.4		12.5	12.1	11.9	13.2	12.1	12.6	12.2	11.8	11.8	12.8
Av. Diff.**		-0.4	-0.3	-0.2	-0.1	-0.1	0.0	-0.4		-0.2	-0.2	-0.5	-0.4	-0.2	-0.4	-0.3	-0.3	-0.2	-0.3
Max. Diff.***		-0.7	-0.6	-0.3	-0.4	-0.3	-0.2	-0.6		-0.4	-0.4	-0.7	-0.6	-0.6	-0.4	-0.8	-0.5	-1.1	-0.4
Bursting Strength																			
Institute		110	116	116	109	112	108	112		108	115	108	109	113	109	111	112	113	113
Mill		105	113	113	108	117	110	108		110	114	109	107	109	109	113	112	107	116
Av. Diff.**		-5	-3	-3	-1	+5	+2	-4		+2	-1	+1	-2	-4	0	+2	0	-6	+3
Max. Diff.***		-5	-16	-5	±4	+8	+5	-7		+6	+4	+5	-14	-6	+2	+5	-7	-9	+5
Tearing Strength, in																			
Institute		364	279	331	309	305	358	320		304	345	292	323	365	348	321	337	321	320
Mill		379	209	361	341	307	371	329		281	359	261	311	337	--	306	353	276	334
Av. Diff.**		+15	-70	+30	+32	+2	-13	+9		-23	+14	-31	-12	-28	--	-15	+16	-45	+14
Max. Diff.***		+32	-123	+33	+45	+15	+29	+28		-30	+37	-42	-45	-50	--	-48	+27	-67	+60
Tearing Strength, across																			
Institute		390	346	369	382	373	394	354		351	406	361	383	374	400	358	369	374	366
Mill		376	295	402	410	367	389	376		357	427	359	392	383	--	351	387	346	372
Av. Diff.**		-14	-51	+33	+28	-6	-5	+22		+6	+21	-2	+9	+9	--	-7	+18	-28	+6
Max. Diff.***		- 22	-91	+44	+52	-17	-25	+46		+24	+58	-4	+28	+22	--	-29	+32	-50	+37

* Comparison based on averages involved only those samples on which mill test data were submitted.
** Average difference is the difference between the Institute mill average and the mill average based on mill test data.
*** Maximum difference encountered in comparing the Institute average and the mill averages for any sample submitted by that particular mill.

TABLE XXIV

COMPARISON OF INSTITUTE-MILL DIFFERENCES BY PERIODS
Average Difference, Per Cent

Mill	Period	Basis Weight	Caliper	Bursting Strength	Tear, in	Tear, across
A	Current	--	--	--	--	--
	142nd	--	--	--	--	--
	141st	--	--	--	--	--
B	Current	0	-3	-5	+4	-4
	142nd	-0.7	+2	-4	-1	-3
	141st	-0.9	-4	+4	+2	-3
C	Current	-3	-2	-3	-25	-15
	142nd	-3	-3	-0.9	-24	-14
	141st	-3	-2	0	-23	-7
D	Current	-1	-2	-3	+9	+9
	142nd	-0.7	-2	-0.9	+2	+2
	141st	-0.5	-2	-2	+3	+5
E	Current	-2	-0.8	-0.9	+10	+7
	142nd	-2	-3	-0.9	-1	+2
	141st	--	--	---	--	--
F	Current	-3	-0.8	+4	+0.7	-2
	142nd	-0.9	-4	+2	+0.6	-0.5
	141st	-1	+0.8	+5	-0.6	+2
G	Current	-2	0	+2	-4	-1
	142nd	-0.2	-2	-0.9	+5	-1
	141st	-0.7	-0.8	+0.9	+6	+4
H	Current	+1	-3	-4	+3	+6
	142nd	+0.9	-4	-5	-6	+3
	141st	+2	-4	+4	-0.3	+3
I	Current	--	---	--	--	--
	142nd	---	--	--	--	--
	141st	--	--	--	--	--
J	Current	-2	-2	+2	-8	+2
	142nd	-0.9	-4	-0.9	-9	-0.8
	141st	-1	-4	0	-13	-2
K	Current	0	-2	-0.9	+4	+5
	142nd	-1	-3	-2	-6	+1
	141st	-2	-4	+5	-11	-3
L	Current	-0.7	-4	+0.9	-11	-0.6
	142nd	-0.9	-3	-2	-14	-6
	141st	-1	-4	-4	-10	-2
M	Current	-2	-3	-2	-4	+2
	142nd	-0.5	-2	-3	-5	+1
	141st	-1	-3	-0.9	-9	-4
N	Current	-1	-2	-4	-8	+2
	142nd	-3	-3	-3	-15	-7
	141st	-4	-2	0	-2	+2
O	Current	-2	-3	0	--	--
	142nd	-1	-4	-4	--	--
	141st	-2	-7	-3	--	--
P	Current	0	-2	+2	-5	-2
	142nd	-0.7	-2	0	-3	-2
	141st	0	-2	+2	-4	-3
Q	Current	-0.7	-2	0	+5	+5
	142nd	-2	-4	-2	-2	-1
	141st	-2	-2	0	-4	+0.5
S	Current	+0.2	-2	-5	-14	-7
	142nd	-0.9	-2	-3	-11	-5
	141st	-0.2	-2	-0.9	-9	-4
T	Current	-0.7	-2	+3	+4	+2
	142nd	-2	-4	+2	-3	+0.3
	141st	-1	-5	+0.9	+3	+8

It may be noted in Table XXIV that for the current period the largest average difference (per cent) between the average basis weight results of the Institute and those of a given mill on corresponding samples was three per cent. By comparison, the largest average difference (per cent) noted for the previous two periods was four per cent. Further, it may be noted that the average basis weight results for Mills H and S were higher than those for the Institute, the average results for Mills B, K, and P were the same, and the average results for the other mills were lower. The variations of more than 1 lb. for Mills C and F may be excessive.

The maximum variation in caliper for the current period was four per cent. This was smaller than the maximum variation of seven per cent for the previous two periods. Compared with the Institute's results, the average test result for Mill G was the same, and the average test results for the other mills were lower. The variation of 0.5 point or more for Mill L may be excessive.

It may be noted in Table XXIV that the bursting strength results exhibited a maximum variation of five per cent for the current period. The maximum variation for the two preceding periods was also five per cent. The average results for Mills F, G, J, L, P, and T were higher than those for the Institute, the average results for Mills O and Q were the same, and the average results for the other mills were lower. None of the variations appear to be exceptionally large. Agreement between Institute and mill results is very good.

It may be seen in Tables XXIII and XXIV that the average machine direction tear results for Mills B, D, E, F, H, K, Q, and T were higher than those for the Institute, and the average results for the other mills were lower. The maximum variation for the current period was twenty-five per cent compared with a maximum variation of twenty-four per cent for the two preceding periods. Agreement between the Institute and mill results was good in most cases. However, several mills--namely, C, L, and S--were associated with differences greater than ten per cent which may be excessive.

With regard to the cross-machine direction tear results, it may be noted that the average results for Mills D, E, H, J, K, M, N, Q, and T were higher than those for the Institute, and the average results for the other mills were lower. The maximum variation for the current period was fifteen per cent and for the two preceding periods fourteen per cent. As in the case of the machine direction results, agreement between Institute and mill results was good. The only difference greater than ten per cent was associated with Mill C.

The comparisons of Institute and mill data for individual sample lots are given in Tables XXV to XLIII for the various mills. In all the comparisons given in Tables XXV to XLIII, the Institute's test values have been used as the reference line.

COMPARISON OF INSTITUTE AND MILL DATA--APRIL 1 THROUGH APRIL 30, 1959

TABLE XXV

MILL A -- 42-LB. LINERBOARD

File No.	Finish	Date Made	Mch. No.	Basis Weight, lb.			Caliper, points			Bursting Strength, p.s.i. gage			Elmendorf Tear, g./sheet					
													In			Across		
				IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.
No samples submitted																		

TABLE XXVI

MILL B -- 42-LB. LINERBOARD

181706	W.	3/15/59	2	43.7	43.3	-0.4	13.3	13.3	0.0	108	103	-5	355	387	+32	385[a]	378	- 7
181808	W.	4/ 6/59	4	43.2	43.6	+0.4	12.0	11.3	-0.7	111	106	-5	374[a]	372	- 2	395[a]	373	-22
Current Mill Average:				43.4	43.4	0.0	12.7	12.3	-0.4	110	105	-5	364	379	+15	390	376	-14

[a]This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

Note: All "current mill average" data are calculated from the totals of the individual readings.

COMPARISON OF INSTITUTE AND MILL DATA--APRIL 1 THROUGH APRIL 30, 1959 (continued)

TABLE XXVII

MILL C -- 42-LB. LINERBOARD

File No.	Finish	Date Made	Mch. No.	Basis Weight, lb.			Caliper, points			Bursting Strength, p.s.i. gage			Elmendorf Tear, g./sheet					
													In			Across		
				IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.
181736	W.F.	3/10/59	1	42.5	42.1	-0.4	13.0	12.9	-0.1	125	117	- 8	282[a]	219	- 63	347[a]	303	-44
181737	W.F.	3/14/59	1	43.1	42.6	-0.5	13.4	13.1	-0.3	112	118	+ 6	273	240	- 33	349[a]	323	-26
181773	W.F.	3/16/59	1	42.7	42.0	-0.7	12.6	12.9	+0.3	120	111	- 9	265	199	- 66	335[a]	275	-60
181774	W.F.	3/19/59	1	43.9	41.8	-2.1	13.2	12.6	-0.6	127	111	-16	303[a]	180	-123	376[a]	285	-91
181856	W.F.	3/25/59	1	44.0	42.4	-1.6	13.2	13.0	-0.2	108	108	0	293[a]	210	- 83	351[a]	307	-44
181857	W.F.	3/29/59	1	44.2	43.0	-1.2	13.0	12.9	-0.1	120	121	+ 1	299[a]	244	- 55	352[a]	318	-34
181858	W.F.	4/ 1/59	1	43.9	42.9	-1.0	13.2	12.8	-0.4	106	107	+ 1	263[a]	179	- 84	327[a]	253	-74
181859	W.F.	4/ 8/59	1	43.8	42.5	-1.3	12.7	12.5	-0.2	108	110	+ 2	254[a]	198	- 56	327[a]	294	-33
Current Mill Average:				43.5	42.4	-1.1	13.1	12.8	-0.3	116	113	- 3	279	209	- 70	346	295	-51

[a]This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

Note: All "current mill average" data are calculated from the totals of the individual readings.

COMPARISON OF INSTITUTE AND MILL DATA--APRIL 1 THROUGH APRIL 30, 1959 (continued)

TABLE XXVIII

MILL D -- 42-LB. LINERBOARD

File No.	Finish	Date Made	Mch. No.	Basis Weight, lb.			Caliper, points			Bursting Strength, p.s.i. gage			Elmendorf Tear, g./sheet					
													In			Across		
				IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.
181707	W.F.	3/10/59	2	44.5	44.6	+0.1	12.7	12.4	-0.3	116	111	- 5	338[a]	360	+22	377[a]	402	+25
181782	W.F.	3/17/59	2	43.6	42.6	-1.0	12.5	12.3	-0.2	108	105	- 3	347[a]	378	+31	348[a]	381	+33
181882	W.F.	3/19/59	2	44.4	44.0	-0.4	11.9	11.7	-0.2	121	119	- 2	326[a]	359	+33	381[a]	425	+44
181883	W.F.	3/20/59	2	44.5	44.0	-0.5	12.0	11.9	-0.1	118	119	+ 1	314[a]	345	+31	371[a]	400	+29
Current Mill Average:				44.3	43.8	-0.5	12.3	12.1	-0.2	116	113	- 3	331	361	+30	369	402	+33

TABLE XXIX

MILL E -- 42-LB. LINERBOARD

181716	WF1S	3/23/59	1	43.0	42.2	-0.8	12.8	12.6	-0.2	111	108	- 3	315	335	+20	381[a]	412	+31
181717	WF1S	3/25/59	1	43.2	42.2	-1.0	12.9	12.5	-0.4	114	110	- 4	319	335	+16	395[a]	410	+15
181718	WF1S	3/26/59	1	42.9	42.3	-0.6	12.8	12.6	-0.2	112	110	- 2	317[a]	336	+19	373[a]	408	+35
181809	WF1S	4/ 3/59	1	43.5	42.5	-1.0	12.6	12.3	-0.3	109	106	- 3	313	354	+41	401[a]	423	+22
181810	WF1S	4/ 8/59	1	43.6	42.6	-1.0	12.2	12.1	-0.1	106	106	0	297[a]	342	+45	359[a]	411	+52
181811	WF1S	4/ 9/59	1	43.4	42.5	-0.9	12.2	12.0	-0.2	107	106	- 1	299	343	+44	371[a]	411	+40
181957	WF1S	4/23/59	1	43.1	42.3	-0.8	12.3	12.5	+0.2	106	110	+ 4	305[a]	340	+35	393[a]	395	+ 2
Current Mill Average:				43.2	42.4	-0.8	12.5	12.4	-0.1	109	108	- 1	309	341	+32	382	410	+28

[a] This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

Note: All "current mill average" data are calculated from the totals of the individual readings.

COMPARISON OF INSTITUTE AND MILL DATA--APRIL 1 THROUGH APRIL 30, 1959 (continued)

TABLE XXX

MILL F -- 42-LB. LINERBOARD

File No.	Finish	Date Made	Mch. No.	Basis Weight, lb.			Caliper, points			Bursting Strength, p.s.i. gage			Elmendorf Tear, g./sheet					
													In			Across		
				IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.
181708	W.F.	2/11/59	1	44.6	43.5	-1.1	12.9	12.9	0.0	116	119	+3	301	307	+ 6	397[a]	391	- 6
181723	W.F.	2/26/59	1	45.0	43.7	-1.3	13.2	12.9	-0.3	113	112	-1	321	308	-13	365[a]	363	- 2
181855	W.F.	3/10/59	1	46.2	44.0	-2.2	12.8	----	---	117	125	+8	305[a]	304	- 1	382[a]	365	-17
181958	W.F.	3/19/59	1	44.1	43.6	-0.5	12.3	12.3	0.0	103	111	+8	294[a]	309	+15	347[a]	351	+ 4
Current Mill Average:				45.0	43.7	-1.3	12.8	12.7	-0.1	112	117	+5	305	307	+ 2	373	367	- 6

TABLE XXXI

MILL G -- 42-LB. LINERBOARD

181850	W.F.	3/24/59	-	43.1	42.6	-0.5	12.1	12.2	+0.1	103	105	+2	350[a]	379	+29	377[a]	384	+ 7
181851	W.F.	3/25/59	-	43.0	42.5	-0.5	12.1	12.1	0.0	111	111	0	346[a]	359	+13	387[a]	389	+ 2
181852	W.F.	3/25/59	-	43.7	42.8	-0.9	12.1	12.0	-0.1	111	114	+3	349[a]	360	+11	398[a]	373	-25
181853	W.F.	3/27/59	-	44.2	43.3	-0.9	13.0	12.8	-0.2	107	108	+1	352	356	+ 4	401[a]	395	- 6
181867	W.F.	3/30/59	-	42.2	41.6	-0.6	12.2	12.1	-0.1	110	110	0	338[a]	345	+ 7	380[a]	372	- 8
181868	W.F.	4/ 3/59	-	44.8	43.7	-1.1	12.5	12.4	-0.1	107	110	+3	399[a]	400	+ 1	407[a]	393	-14
181869	W.F.	4/ 3/59	-	44.6	44.0	-0.6	12.7	12.5	-0.2	110	107	-3	367[a]	389	+22	404[a]	392	-12
181870	W.F.	4/11/59	-	45.5	44.3	-1.2	12.9	12.8	-0.1	108	113	+5	367	380	+13	401[a]	412	+11
Current Mill Average:				43.9	43.1	-0.8	12.4	12.4	0.0	108	110	+2	358	371	-13	394	389	- 5

[a]This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

Note: All "current mill average" data are calculated from the totals of the individual readings.

COMPARISON OF INSTITUTE AND MILL DATA--APRIL 1 THROUGH APRIL 30, 1959 (continued)

TABLE XXXII

MILL H -- 42-LB. LINERBOARD

File No.	Finish	Date Made	Mch. No.	Basis Weight, lb.			Caliper, points			Bursting Strength, p.s.i. gage			Elmendorf Tear, g./sheet					
													In			Across		
				IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.
181801	WF1S	3/ 7/59	2	43.6	44.3	+0.7	14.0	13.8	-0.2	113	110	-3	315	343	+28	366[a]	380	+14
181802	WF1S	3/12/59	2	43.1	43.7	+0.6	13.6	13.0	-0.6	113	106	-7	317	323	+ 6	354[a]	371	+17
181803	WF1S	3/13/59	2	43.5	43.8	+0.3	14.0	13.6	-0.4	110	107	-3	313[a]	329	+16	359[a]	380	+21
181804	WF1S	3/16/59	2	43.4	44.2	+0.8	13.6	13.0	-0.6	107	108	+1	333[a]	334	+ 1	335[a]	381	+46
181805	WF1S	3/17/59	2	43.2	44.2	+1.0	13.9	13.5	-0.4	115	108	-7	319	316	- 3	356[a]	368	+12
Current Mill Average:				43.4	44.0	+0.6	13.8	13.4	-0.4	112	108	-4	320	329	+ 9	354	376	+22

TABLE XXXIII

MILL I -- 42-LB. LINERBOARD

No samples submitted

[a]This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

Note: All "current mill average" data are calculated from the totals of the individual readings.

COMPARISON OF INSTITUTE AND MILL DATA--APRIL 1 THROUGH APRIL 30, 1959 (continued)

TABLE XXXIV

MILL J -- 42-LB. LINERBOARD

File No.	Finish	Date Made	Mch. No.	Basis Weight, lb.			Caliper, points			Bursting Strength, p.s.i. gage			Elmendorf Tear, g./sheet					
													In			Across		
				IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.
181792	W.F.	3/ 5/59	1	43.8	42.7	-1.1	12.7	12.5	-0.2	105	108	+3	279	269	-10	317[a]	341	+24
181793	W.F.	3/ 6/59	1	45.4	44.4	-1.0	13.0	12.8	-0.2	110	109	-1	300	277	-23	355[a]	353	- 2
181794	W.F.	3/ 9/59	1	43.9	43.4	-0.5	12.8	12.6	-0.2	108	107	-1	287	264	-23	328[a]	344	+16
181795	W.F.	3/11/59	1	43.6	42.9	-0.7	12.4	12.2	-0.2	111	111	0	319	289	-30	357[a]	380	+23
181796	W.F.	3/26/59	1	43.8	42.6	-1.2	12.6	12.6	0.0	113	113	0	296	272	-24	355[a]	338	-17
181797	W.F.	3/26/59	1	45.0	43.7	-1.3	12.9	12.8	-0.1	110	116	+6	315	285	-30	371[a]	369	- 2
181798	W.F.	3/27/59	1	43.1	41.8	-1.3	12.4	12.0	-0.4	107	107	0	319	291	-28	348[a]	353	+ 5
181799	W.F.	3/27/59	1	45.2	43.8	-1.4	13.0	12.8	-0.2	103	107	+4	317	302	-15	378[a]	382	+ 4
Current Mill Average:				44.2	43.2	-1.0	12.7	12.5	-0.2	108	110	+2	304	281	-23	351	357	+ 6

[a] This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

Note: All "current mill average" data are calculated from the totals of the individual readings.

COMPARISON OF INSTITUTE AND MILL DATA--APRIL 1 THROUGH APRIL 30, 1959 (continued)

TABLE XXXV

MILL K -- 42-LB. LINERBOARD

File No.	Finish	Date Made	Mch. No.	Basis Weight, lb.			Caliper, points			Bursting Strength, p.s.i. gage			Elmendorf Tear, g./sheet					
													In			Across		
				IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.
181713	W.B.	3/16/59	-	43.6	43.8	+0.2	12.7	12.5	-0.2	108	108	0	361	361	0	399[a]	420	+21
181714	W.B.	3/17/59	-	44.6	44.6	0.0	12.4	12.0	-0.4	114	114	0	346	360	+14	408[a]	409	+ 1
181715	W.B.	3/18/59	-	44.2	44.2	0.0	12.5	12.3	-0.2	112	110	-2	353[a]	352	- 1	419[a]	405	-14
181766	W.B.	3/19/59	-	43.4	43.6	+0.2	12.4	12.1	-0.3	118	117	-1	335[a]	371	+36	399[a]	424	+25
181767	W.B.	3/20/59	-	43.1	43.0	-0.1	12.5	12.2	-0.3	114	116	+2	327[a]	344	+17	375[a]	425	+50
181768	W.B.	3/20/59	-	43.8	44.0	+0.2	12.2	12.1	-0.1	114	118	+4	351	349	- 2	426[a]	447	+21
181769	W.B.	3/21/59	-	43.9	43.9	0.0	12.4	12.3	-0.1	111	110	-1	354[a]	351	- 3	412[a]	412	0
181770	W.B.	3/22/59	-	43.9	43.8	-0.1	12.2	12.1	-0.1	121	120	-1	351	388	+37	413[a]	443	+30
181845	W.B.	3/23/59	-	43.2	43.2	0.0	12.1	12.0	-0.1	115	117	+2	348[a]	367	+19	403[a]	461	+58
181846	W.B.	3/29/59	-	43.9	43.8	-0.1	11.8	11.8	0.0	116	114	-2	343[a]	351	+ 8	396[a]	423	+27
181847	W.B.	3/30/59	-	44.1	43.9	-0.2	12.0	11.8	-0.2	119	116	-3	334[a]	367	+33	409[a]	424	+15
181848	W.B.	3/30/59	-	43.7	43.6	-0.1	12.2	12.0	-0.2	114	115	+1	330[a]	351	+21	409[a]	421	+12
181849	W.B.	3/31/59	-	43.9	43.7	-0.2	12.0	11.9	-0.1	114	114	0	353[a]	357	+ 4	409[a]	441	+32
Current Mill Average:				43.8	43.8	0.0	12.3	12.1	-0.2	115	114	-1	345	359	+14	406	427	+21

[a]This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

Note: All "current mill average" data are calculated from the totals of the individual readings.

COMPARISON OF INSTITUTE AND MILL DATA--APRIL 1 THROUGH APRIL 30, 1959 (continued)

TABLE XXXVI

MILL L -- 42-LB. LINERBOARD

File No.	Finish	Date Made	Mch. No.	Basis Weight, lb.			Caliper, points			Bursting Strength, p.s.i. gage			Elmendorf Tear, g./sheet					
													In			Across		
				IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.
181763	WF1S	3/23/59	1	42.7	42.3	-0.4	12.5	11.8	-0.7	105	110	+ 5	291[a]	260	-31	360[a]	360	0
181764	WF1S	3/25/59	1	43.3	43.2	-0.1	12.5	12.0	-0.5	106	105	- 1	283[a]	265	-18	359[a]	358	- 1
181800	WF1S	4/ 1/59	1	42.2	42.4	+0.2	12.1	11.8	-0.3	107	106	- 1	287	255	-32	352[a]	348	- 4
181873	WF1S	4/ 6/59	1	44.1	43.2	-0.9	12.5	12.1	-0.4	114	114	0	305	263	-42	373[a]	369	- 4
Current Mill Average:				43.1	42.8	-0.3	12.4	11.9	-0.5	108	109	+ 1	292	261	-31	361	359	- 2

TABLE XXXVII

MILL M -- 42-LB. LINERBOARD

181738	----	3/20/59	2	43.8	43.1	-0.7	14.0	13.4	-0.6	108	116	+ 8	350[a]	305	-45	387[a]	369	-18
181777	WF1S	3/23/59	2	44.0	43.5	-0.5	13.6	13.5	-0.1	121	107	-14	325[a]	315	-10	407[a]	403	- 4
181874	WF1S	4/ 7/59	2	44.3	43.6	-0.7	13.6	13.4	-0.2	104	101	- 3	320[a]	331	+11	387[a]	415	+28
181884	WF1S	4/14/59	2	44.8	43.5	-1.3	13.6	13.0	-0.6	104	104	0	323	316	- 7	376[a]	388	+12
181921	WF1S	4/15/59	2	43.4	42.9	-0.5	13.1	12.7	-0.4	107	106	- 1	298	288	-10	356[a]	384	+28
Current Mill Average:				44.1	43.3	-0.8	13.6	13.2	-0.4	109	107	- 2	323	311	-12	383	392	+ 9

[a]This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

Note: All "current mill average" data are calculated from the totals of the individual readings.

COMPARISON OF INSTITUTE AND MILL DATA--APRIL 1 THROUGH APRIL 30, 1959 (continued)

TABLE XXXVIII

MILL N -- 42-LB. LINERBOARD

File No.	Finish	Date Made	Mch. No.	Basis Weight, lb.			Caliper, points			Bursting Strength, p.s.i. gage			Elmendorf Tear, g./sheet					
													In			Across		
				IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.
181771	W.F.	3/23/59	-	43.6	42.7	-0.9	12.5	11.9	-0.6	115	112	-3	387[a]	337	-50	383[a]	388	+ 5
181772	W.F.	3/23/59	-	43.9	43.2	-0.7	12.6	12.3	-0.3	113	110	-3	386[a]	352	-34	383[a]	405	+22
181875	W.F.	4/ 2/59	-	43.4	42.8	-0.6	12.1	11.9	-0.2	113	107	-6	343[a]	321	-22	365[a]	364	- 1
181876	W.F.	4/ 2/59	-	43.6	43.3	-0.3	12.2	12.3	+0.1	109	106	-3	343[a]	339	- 4	366[a]	374	+ 8
Current Mill Average:				43.6	43.0	-0.6	12.3	12.1	-0.2	113	109	-4	365	337	-28	374	383	+ 9

TABLE XXXIX

MILL O -- 42-LB. LINERBOARD

181709	----	3/20/59	2	42.5	42.1	-0.4	13.0	12.7	-0.3	105	107	+2	355[a]			399[a]		
181710	----	3/23/59	1	43.5	42.4	-1.1	12.9	12.5	-0.4	113	112	-1	341[a]			401[a]		
Current Mill Average:				43.0	42.3	-0.7	13.0	12.6	-0.4	109	109	0	348			400		

[a] This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

Note: All "current mill average" data are calculated from the totals of the individual readings.

COMPARISON OF INSTITUTE AND MILL DATA--APRIL 1 THROUGH APRIL 30, 1959 (continued)

TABLE XL

MILL P -- 42-LB. LINERBOARD

File No.	Finish	Date Made	Mch. No.	Basis Weight, lb.			Caliper, points			Bursting Strength, p.s.i. gage			Elmendorf Tear, g./sheet					
													In			Across		
				IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.
181703	W.F.	3/25/59	-	42.7	43.0	+0.3	12.2	12.3	+0.1	112	117	+5	307	313	+ 6	359[a]	360	+ 1
181704	W.F.	3/26/59	-	44.0	43.8	-0.2	12.7	12.2	-0.5	112	113	+1	329	313	-16	357[a]	357	0
181705	W.F.	3/27/59	-	43.0	42.5	-0.5	12.8	12.3	-0.5	109	112	+3	345[a]	297	-48	371[a]	348	-23
181760	W.F.	4/ 1/59	-	43.5	43.4	-0.1	12.4	12.0	-0.4	114	117	+3	320[a]	324	+ 4	353[a]	344	- 9
181761	W.F.	4/ 2/59	-	42.9	42.9	0.0	12.8	12.0	-0.8	106	110	+4	319[a]	291	-28	361[a]	355	- 6
181762	W.F.	4/ 3/59	-	43.1	43.3	+0.2	12.6	12.2	-0.4	113	112	-1	321[a]	303	-18	349[a]	343	- 6
181842	W.F.	4/ 8/59	-	42.4	42.4	0.0	12.1	12.0	-0.1	116	116	0	316[a]	296	-20	368[a]	339	-29
181843	W.F.	4/ 9/59	-	42.0	41.8	-0.2	12.3	12.1	-0.2	108	106	-2	308[a]	293	-15	353[a]	345	- 8
181844	W.F.	4/10/59	-	42.4	43.4	+1.0	12.4	12.5	+0.1	110	112	+2	325[a]	324	- 1	355[a]	368	+13
Current Mill Average:				42.9	42.9	0.0	12.5	12.2	-0.3	111	113	+2	321	306	-15	358	351	- 7

TABLE XLI

MILL Q -- 42-LB. LINERBOARD

181775	W.F.	4/ 1/59	2	43.4	43.3	-0.1	12.3	12.0	-0.3	110	112	+2	335[a]	362	+27	363[a]	395	+32
181776	W.F.	4/ 1/59	2	43.6	43.5	-0.1	12.2	11.9	-0.3	110	112	+2	341[a]	362	+21	369[a]	389	+20
181871	W.F.	4/10/59	2	44.2	43.8	-0.4	11.9	11.4	-0.5	108	113	+5	331[a]	351	+20	370[a]	380	+10
181872	W.F.	4/13/59	1	44.8	44.0	-0.8	12.0	12.1	+0.1	119	112	-7	340[a]	338	- 2	374[a]	382	+ 8
Current Mill Average:				44.0	43.7	-0.3	12.1	11.8	-0.3	112	112	0	337	353	+16	369	387	+18

[a]This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

Note: All "current mill average" data are calculated from the totals of the individual readings.

COMPARISON OF INSTITUTE AND MILL DATA--APRIL 1 THROUGH APRIL 30, 1959 (continued)

TABLE XLII

MILL S -- 42-LB. LINERBOARD

File No.	Finish	Date Made	Mch. No.	Basis Weight, lb.			Caliper, points			Bursting Strength, p.s.i. gage			Elmendorf Tear, g./sheet					
													In			Across		
				IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.
181783	W.F.	3/18/59	2	42.7	44.1	+1.4	11.4	12.3	+0.9	112	105	-7	318[a]	268	-50	351[a]	342	- 9
181784	W.F.	3/18/59	2	43.0	44.1	+1.1	11.8	12.3	+0.5	113	105	-8	315[a]	280	-35	361[a]	343	-18
181785	W.F.	3/21/59	2	43.8	43.3	-0.5	12.6	11.5	-1.1	112	107	-5	331[a]	292	-39	386[a]	355	-31
181786	W.F.	3/21/59	2	44.0	43.3	-0.7	12.5	11.5	-1.0	111	107	-4	331	264	-67	389[a]	339	-50
181787	W.F.	3/25/59	2	44.0	44.2	+0.2	12.4	12.3	-0.1	114	105	-9	341	278	-63	371[a]	344	-27
181806	W.F.	4/ 1/59	2	43.3	43.3	0.0	11.9	11.4	-0.5	117	110	-7	299[a]	279	-20	362[a]	348	-14
181807	W.F.	4/ 1/59	2	43.4	43.2	-0.2	11.7	11.4	-0.3	115	110	-5	311	271	-40	396[a]	347	-49
Current Mill Average:				43.5	43.6	+0.1	12.0	11.8	-0.2	113	107	-6	321	276	-45	374	346	-28

TABLE XLIII

MILL T -- 42-LB. LINERBOARD

181711	WFIS	3/20/59	1	43.3	42.7	-0.6	13.3	12.9	-0.4	111	116	+5	345[a]	338	- 7	378[a]	376	- 2
181712	WFIS	3/21/59	1	43.0	42.4	-0.6	13.1	12.7	-0.4	115	116	+1	319[a]	309	-10	369[a]	352	-17
181765	WFIS	3/26/59	1	42.6	42.6	0.0	13.0	12.7	-0.3	112	116	+4	295[a]	355	+60	350[a]	387	+37
Current Mill Average:				42.9	42.6	-0.3	13.1	12.8	-0.3	113	116	+3	320	334	+14	366	372	+ 6

[a]This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

Note: All "current mill average" data are calculated from the totals of the individual readings.

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